

operator to document the 95% organic removal efficiency of the control device, and certify that no waste streams greater than 10,000 ppmw at their point of origination were entering the centralized treatment process. The EPA chose the upper value of 10,000 ppmw because any waste stream with less than 10,000 volatile organic concentration, when treated with a 95% efficient organic control device, would be reduced to below 500 ppmw (and thus would not require further control under the subpart CC regulations. The EPA considers the combination of these two criteria (95% efficient organic control device, and waste streams below 10,000 ppmw VO concentration at their point of waste origination) to be adequate to ensure that any waste stream entering the treatment process is adequately treated for the purpose of the subpart CC standards.

### 3. Exemptions

An exemption from subpart CC control requirements is added to the General Standards to further clarify that a tank or surface impoundment used for biological treatment of hazardous waste in accordance with provisions in the subpart CC General Standards (§ 265.1082(c)(2)(vi) or § 264.1082(c)(2)(vi)) is exempt from the control device requirements under the rule. This was the Agency's intent in the 1994 promulgated rule, but several commenters advised the EPA that this intent was not evident. Therefore, the EPA is making this addition to the General Standards to more clearly describe this intent.

The following two exemptions are being added to the subpart CC General Standards in order to avoid the potential overlap of the subpart CC rules with RCRA standards established as part of the Land Disposal Restrictions (LDR) and to avoid overlap with the recently promulgated Benzene Waste Operations NESHAP.

In response to commenters' requests that compliance with applicable LDR treatment standards be reinstated as a subpart CC treatment alternative, an exemption from the subpart CC control requirements is being added for a tank, surface impoundment, or container if the material placed in the unit is a hazardous waste that meets the numerical concentration limits for organics applicable to the hazardous waste, as specified in 40 CFR part 268 (Land Disposal Restrictions) under Table—"Treatment Standards for Hazardous Waste" in 40 CFR 268.40, or has been treated by the treatment technology established by EPA for the waste in 40 CFR 268.42(a), or treated by

an equivalent method of treatment approved by EPA pursuant to 40 CFR 268.42(b).

The EPA in fact originally proposed such a provision (see 56 FR 33491, July 22, 1991), and commenters stressed again that wastes meeting LDR requirements for organics would have reduced organic concentrations sufficiently so that there need not be air emission controls on the units receiving the wastes. Upon reflection, EPA now agrees with these comments. The LDR treatment standards are based on the performance of Best Demonstrated Available Technology and are deemed sufficient to minimize threats to human health and the environment posed by land disposal of the waste. See 51 FR 40572, November 7, 1986 and RCRA section 3004(m)(1). In fact, the standards for most organics reflect the performance of combustion technology, which destroys organics to non-detectable levels, so that the treatment standard is actually the analytic detection limit for the organic times a factor which reflects technological variability. Consequently, it is EPA's finding here that units receiving wastes that satisfy these standards for organics need not be controlled further, since the organics in the wastes are already reduced to levels where threats posed by release of the organics have been minimized.

The EPA notes that, to be exempt from the subpart CC standards, the waste must meet the LDR treatment standards for that waste whether or not the waste actually is prohibited (or restricted) from land disposal, i.e., whether or not the waste is going to be ultimately land disposed. Thus, for example, if an organic ignitable waste is going to be managed in tanks and ultimately disposed of in a manner not involving land disposal, in order for the tanks to be exempt from subpart CC (assuming the subpart CC rules otherwise apply), the waste would have to meet the treatment standards for D001 wastes. It should be clear from this example that the treatment standards are being used here as a means of demonstrating that further control of air emissions from the waste is not necessary to protect human health and the environment. This determination does not hinge on whether the waste is being land disposed (i.e., on whether the waste would otherwise have to be treated to meet the standard as a precondition to land disposal).

The EPA is amending the 1994 final rule to address certain of the commenters' concerns regarding applicability of the subpart CC rules to incinerator bulk feed tanks (that is,

tanks used for bulk feed of hazardous waste to an incinerator). A standard industry practice is to control the air emissions from these tanks by enclosing the tank and feed operation, and venting emissions for the enclosure through a closed-vent system to an organic emission control device. The EPA has received comments stating that some industry members have alternate designs which allow them to effectively operate bulk incinerator feed systems using a tight-fitting cover on the tank and enclosing the feed line, with all emissions vented to a control device.

The EPA is addressing two issues with respect to those former bulk feed operations. The first is the efficiency of the organic control device, and whether existing facilities must replace those devices previously installed to comply with the Benzene Waste Operations NESHAP. The second issue is whether an enclosure can provide adequate capture and control of organic emissions from an open tank, when compared with a tight-fitting cover on that tank.

The subpart CC rules require 95% reduction of total organics in vapor streams, by weight. The Benzene Waste Operations NESHAP (40 CFR part 61, subpart FF) requires 98% reduction of benzene in vapor streams. This distinction is appropriate, given the Benzene Waste Operations NESHAP's purpose to control benzene specifically, and the subpart CC rule's purpose to control total organics (including benzene). However, incinerator bulk feed operators have installed non-combustion control devices (such as activated carbon systems and condensers) which achieve 98% reduction of benzene, but do not effectively achieve 95% reduction of total organics. (This is because benzene is more amenable to certain reduction technologies than other organic compounds.)

The EPA has decided that it is not justified to require owners and operators to replace these relatively new control devices, which were installed pursuant to EPA regulation, and is therefore adding an exemption for control devices installed on such systems.<sup>4</sup> The EPA is making this decision chiefly due to the high replacement cost, action in reliance on EPA's Benzene Waste Operations

<sup>4</sup>Although there is probably some degree of decrease in protectiveness between these control devices and the proscribed 95% total organic control device requirements, EPA considers that difference to be not significant enough to warrant the substantial dislocations noted above. With respect to newly constructed control devices, there would be obviously, no such dislocations, and EPA therefore, does not believe there is any reason to forego the full protection provided by the 95% total organic control device efficiency requirements.

NESHAP, and the desire for consistency among the various standards controlling organic constituents.

With respect to enclosures used in lieu of a discreet tank cover, the issue is the same as that which EPA is addressing for all tank systems (see Section G of this Preamble.)

#### F. Waste Determination Procedures

Under the subpart CC RCRA air rules, air emission controls are not required for a hazardous waste management unit when the unit manages hazardous waste having an average VO concentration less than the action level (i.e., 500 ppmw at the point of waste origination). As part of the procedure for determining the VO concentration of the hazardous waste, the EPA allowed that an owner or operator could use either: (1) Direct measurement using Method 25D for preparation and analysis of samples of the waste collected in accordance with the procedures specified in the rule; or (2) the owner's or operator's knowledge of the VO concentration in the waste based on information, as specified in the rule.

In response to comments received concerning Method 25D relating to aggressiveness, expense, and repeatability of the method, the EPA decided to add other appropriate test methods that an owner or operator can choose to use for direct measurement of the VO concentration of a hazardous waste (see discussion below). In addition, the EPA is making certain other changes to facilitate the use of organic concentration data obtained using other test methods not specifically listed in the rule. The EPA believes that the changes being incorporated into the waste determination requirements in conjunction with changes to the applicability and action level for the subpart CC RCRA air rules for tanks, surface impoundments, and containers provide a range of options for determining the VO concentration of a hazardous waste such that every owner and operator of a facility subject to the final rule has available practical and inexpensive waste determination alternatives.

The EPA developed Method 25D to provide a relative measure of the potential for specific volatile organic compounds to be emitted from waste materials. When using Method 25D, the waste is analyzed to determine the total concentration, by weight, of all organics purged from the waste sample. However, some commenters stated that measuring all organics resulted in an overly aggressive method. Commenters suggested that there is some universe of organic compounds which usually do

not volatilize, but which some test methods would measure. In a practical sense, the EPA does not consider it equitable to require air emission controls for wastes that do not contain organic compounds which are likely to volatilize. In response to these comments, the EPA is amending the waste determination procedures to allow the owner or operator to discount any contribution to the total volatile organic concentration that is a result of including a compound with a Henry's law constant of less than 0.1 mole-fraction-in-the-gas-phase/mole-fraction-in-the-liquid-phase (0.1 Y/X) [which can also be expressed as  $1.8 \times 10^{-6}$  atmospheres/gram-mole/ $m^3$ ] at 25 degrees Celsius. The Henry's law constant of a compound is one indication that is commonly used to predict the potential of a compound to volatilize.

If the waste contains compounds with Henry's law constants below the cutoff level, the VO concentration for the waste can be adjusted to exclude the VO concentration of these compounds from the total VO concentration for the waste stream. The contribution to the measured total VO concentration for the waste that is made by a specific compound can be determined by multiplying the actual concentration of the compound in the waste times the appropriate compound-specific adjustment " $f_m$  factor" to obtain the Method 25D VO concentration. The VO concentration for the compound, with a Henry's law constant of less than 0.1 Y/X, can then be subtracted from the total VO concentration measured for the waste. In order to identify those compounds with a Henry's law constant below the cutoff level, the EPA has published a table listing the known compounds as part of today's amendments. The Henry's law constant value used as the cutoff in determining the VO concentration of a waste has been used in other EPA regulations (e.g., the Off-Site Waste and Recovery Operations NESHAP and the HON) and was selected based on modeling studies to identify and classify compounds with a significant potential for air emissions when present in a waste/wastewater system. With this amendment to the waste determination procedures, the EPA considers Method 25D to be an appropriate method for determining the VO concentration of hazardous wastes subject to the subpart CC RCRA air rules. Therefore, Method 25D continues to be an approved test method for determining the VO concentration of a waste, although other methods are allowed as direct measurement under

today's amendment. This is discussed in greater detail below.

Other test methods have been developed by the EPA for use in rulemakings under the Clean Water Act that measure the concentration of organic pollutants in municipal and industrial wastewaters (see appendix A to 40 CFR part 136). Commenters suggested that certain of these test methods are applicable to EPA air rulemakings affecting hazardous waste and wastewater management units. After extensive review, the EPA decided that as alternatives to using Method 25D for direct measurement of VO concentration in a hazardous waste for the subpart CC RCRA air rules it is appropriate to add Methods 624, 625, 1624, and 1625 (all contained in 40 CFR part 136, appendix A) and Methods 8260(B) and 8270(C) (both in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods" in EPA Publication SW-846) when these methods are used under certain specified conditions. It is important to note that for each of these methods there is a published list of chemical compounds which the EPA considers the method appropriate to measure. The owner or operator may only use these methods to measure compounds that are contained on the list associated with that method, unless specified validation procedures are also performed. Further, for the purpose of a waste determination, the owner or operator must evaluate the mass of all VO compounds in a waste that have a Henry's Law value above the 0.1 Y/X cutoff. Therefore, the owner or operator is responsible for determining that the analytical method being used for a waste determination is sufficient to evaluate all of the applicable organic compounds that are contained in the waste. If an owner or operator chooses to use a method other than Method 25D to analyze a waste that contains unknown compounds or many different compounds, it may be necessary to perform screening analyses to verify that the alternate analytical method chosen is, in fact, appropriate to evaluate all the necessary compounds.

Because these methods measure the total concentration of various constituents, owners and operators may choose to "correct" these measured values to equate to the values that would be measured using Method 25D. This is accomplished by multiplying the total concentration measured values times the appropriate compound-specific adjustment " $f_m$  factor" to obtain the Method 25D VO concentration. The EPA has published lists of the compound-specific adjustment factors